

WHAT IS CLAIMED IS:

1. A plate-making method of a lithographic printing plate which comprises the steps of exposure of a photosensitive lithographic printing plate having the acid value of a photosensitive layer of 1.0 meq/g or less with a laser beam, and then development with a developing solution having a pH value of 13.0 or less at a developing speed in an unexposed domain of 0.05 $\mu\text{m/s}$ or more and at an osmotic speed of a developing solution in an exposed domain of 0.1 $\mu\text{m/s}$ or less.

2. A plate-making method of a lithographic printing plate which comprises the steps of exposure of a photosensitive lithographic printing plate having the acid value of a photosensitive layer of 1.0 meq/g or less with a laser beam, and then development with a developing solution having a pH value of 13.0 or less so as to dissolve the photosensitive layer in order from the surface without swelling and peeling of the photosensitive layer.

3. A developing solution for a photosensitive lithographic printing plate which is a non-silicate-based developing solution and contains an inorganic alkali agent and a nonionic compound represented by the following formula (I):

A-W

(I)

wherein A represents a hydrophobic organic group having 1.5 or more of logP of A-H, and W represents a hydrophilic organic

group having less than 1.0 of logP of W-H.

4. The developing solution for a photosensitive lithographic printing plate as claimed in claim 3, which contains a chelating agent to a divalent metal.

5. The developing solution for a photosensitive lithographic printing plate as claimed in claim 3, which has a pH of from 10.0 to 12.5 and electrical conductance of from 3 to 30 mS/cm.

6. The developing solution for a photosensitive lithographic printing plate as claimed in claim 3, which contains a carbonic acid or a carbonate.

7. The plate-making method of a lithographic printing plate as claimed in claim 1, wherein the photosensitive lithographic printing plate is a photopolymerizable lithographic printing plate having on a support a photopolymerizable photosensitive layer containing the following i) and ii) as essential components:

i) a compound having an addition polymerizable ethylenically unsaturated bond,

ii) a photopolymerization initiator.

8. The plate-making method of a lithographic printing plate as claimed in claim 2, wherein the photosensitive lithographic printing plate is a photopolymerizable lithographic printing plate having on a support a photopolymerizable photosensitive layer containing the following

i) and ii) as essential components:

i) a compound having an addition polymerizable ethylenically unsaturated bond,

ii) a photopolymerization initiator.

9. The plate-making method of a lithographic printing plate as claimed in claim 7, wherein the photopolymerizable photosensitive layer contains a titanocene-based initiator or a colorant such as a pigment.

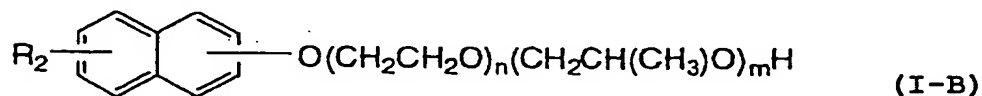
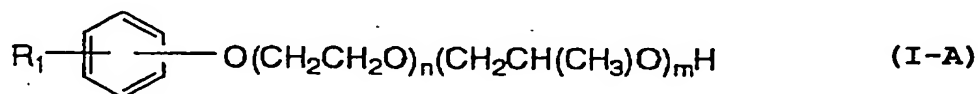
10. The plate-making method of a lithographic printing plate as claimed in claim 8, wherein the photopolymerizable photosensitive layer contains a titanocene-based initiator or a colorant such as a pigment.

11. The plate-making method of a lithographic printing plate as claimed in claim 7, wherein the support is an anodized aluminum support containing an organic compound having a phosphorus-containing atomic group on the surface of the support.

12. The plate-making method of a lithographic printing plate as claimed in claim 8, wherein the support is an anodized aluminum support containing an organic compound having a phosphorus-containing atomic group on the surface of the support.

13. A photosensitive lithographic printing plate comprising a photopolymerizable photosensitive layer, wherein the photosensitive layer contains a compound having an acid radical having a pKa of 9 or less and the acid value of the photosensitive layer is from 0.20 to 0.60 meq/g.

14. A plate-making method of a lithographic printing plate which comprises the steps of exposure of a photosensitive lithographic printing plate comprising a support having an anodized film on the surface having provided thereon a photopolymerizable photosensitive layer containing a compound having an addition polymerizable ethylenically unsaturated double bond, a high polymer soluble or swelling in an alkali aqueous solution, and a photopolymerization initiator, with a laser beam, and then development with a developing solution comprising an alkali aqueous solution containing at least one of a nonionic aromatic ether-based activator represented by the following formula (I-A) and a nonionic aromatic ether-based activator represented by the following formula (I-B):



wherein R_1 and R_2 each represents H or an alkyl group having from 1 to 100 carbon atoms, and n and m each represents an integer of from 0 to 100.

15. A plate-making method of a lithographic printing plate which comprises the steps of image exposure of a photo-sensitive lithographic printing plate comprising an aluminum support having provided thereon a photopolymerizable photo-sensitive layer containing a compound having an ethylenically unsaturated double bond, a photopolymerization initiator and a high polymer binder, and then development with a developing solution containing an inorganic alkali agent and a nonionic surfactant having a polyoxyalkylene ether group, having a pH of from 10.0 to 12.5, and an electrical conductance of from 3 to 30 mS/cm.